Mini Docking Station

User’s Manual

ABOUT THIS MANUAL

This manual is designed for use with the Mini Docking Station. Information in this document has been carefully checked for accuracy; however, no guarantee is given to the correctness of the contents. The information in this document is subject to change without notice. The manufacturer does not make any representations or warranties (implied or otherwise) regarding the accuracy and completeness of this document and shall in no event be liable for any loss of profit or any commercial damage, including but not limited to special, incidental, consequential, or other damage.

SAFETY INSTRUCTIONS

Always read the safety instructions carefully:

- Keep this User's Manual for future reference
- Keep this equipment away from humidity
- If any of the following situation arises, get the equipment checked by a service technician:
  - The equipment has been dropped and damaged.
  - The equipment has obvious sign of breakage.
  - The equipment has not been working well or you cannot get it to work according to the User's Manual.

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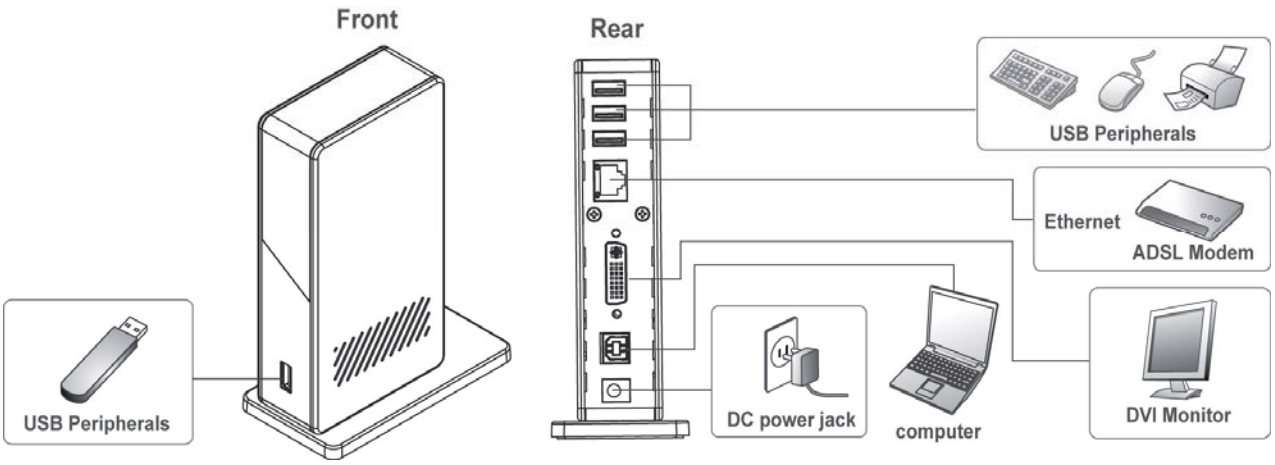
1. Introduction

Mini Docking Station is a unique expansion unit designed for computers that have extra connectivity demands. Just with one USB port on the computer, its connection can be extended not only to USB peripherals, Ethernet network, speaker, and microphone but also an additional connect or disconnect the peripherals from the rear of a computer.

With the video port your computer can be connected to one more monitor, LCD or projector. The connected monitor can be configured to either mirror your primary screen, or extend the Window desktop allowing visibility of more applications at the same time. No more stacking windows within the confines of a single display.



Features

- DualView let you expend your work area across your notebook screen and external monitor.
- Build-in DisplayLink chipset solution-Have Extender (DualView) and Mirror mode.
- DVI resolution up to 1920x1080 pixels for regular monitor.
- Gain instant access to your keyboard, monitor, mouse and all peripherals with one USB plug.
- Mini tower design reduces desktop footprint.
- Plug-n-play and hot pluggable, so you can connect to the dock and swap devices without shutting down.
- Front USB port makes connections quick and easy.
- Supports Windows®2000 SP4, XP SP2, Vista™ , Windows® 7

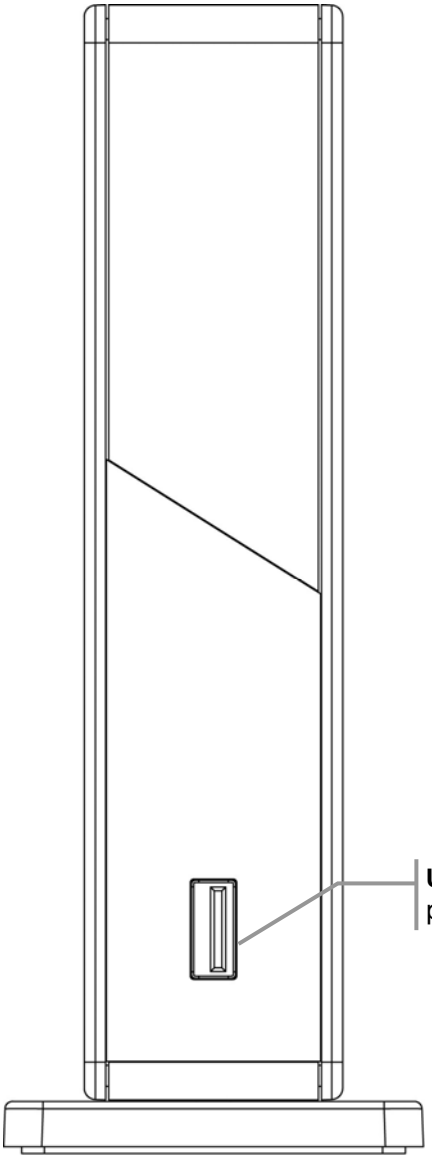
Package Contents

- Mini Docking Station x1
- USB 2.0 Cable x1
- Power Adapter x1
- DVI-to-VGA adapter x1
- CD (Driver and User's Manual) x1
- Quick Installation Guide x1

System Requirements

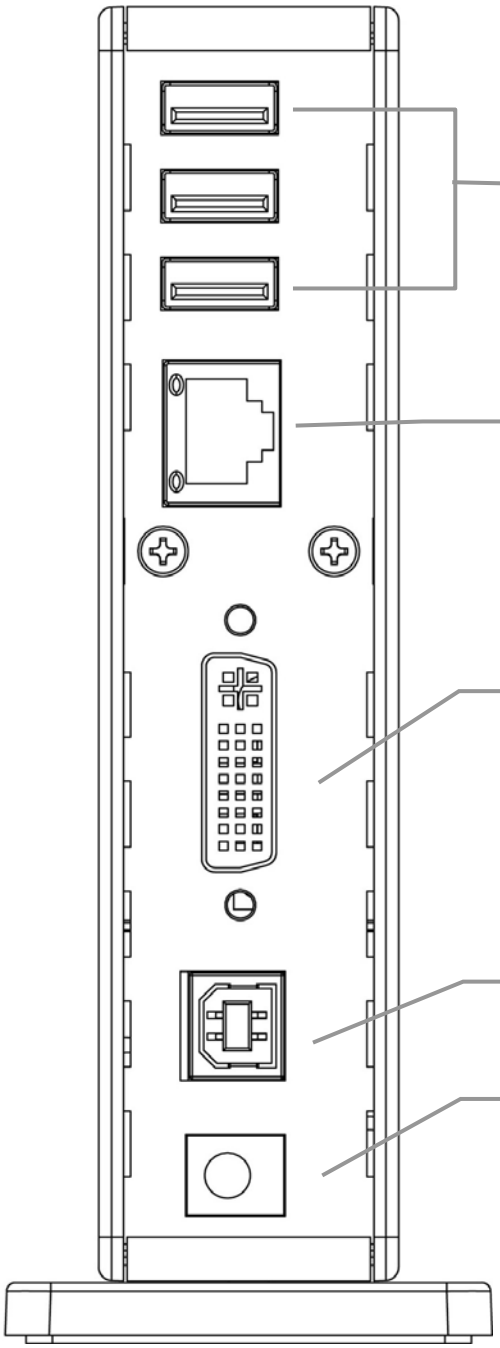
- Windows®2000 SP4, XP SP2, Vista™ , Windows® 7

Front Panel



USB 2.0 downstream ports: For connection to USB peripherals.

Rear Panel



3 USB 2.0 downstream ports (A type female connector): For connection to USB peripherals.

10/100 Mbps Ethernet port: For connection to the Ethernet network via a network cable (not provided).

DVI video output port: For connection to a VGA or DVI monitor.
For DVI model, if you want to connect to a VGA monitor, use the provided DVI to VGA adapter for connection.

USB upstream port: For connection to the USB port of the host computer.

Power jack: For connection to the provided power adapter. The Docking Station always needs external power supply for operation, as it does not take power from the USB bus.

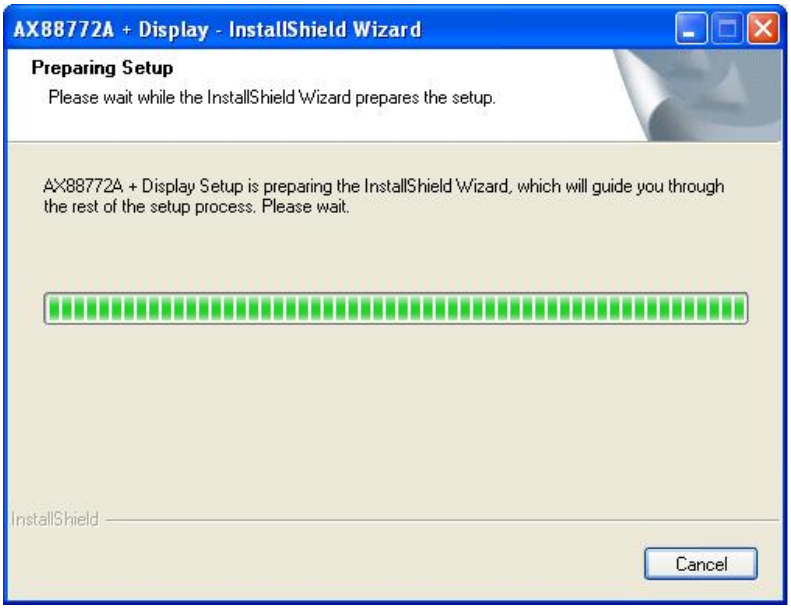
2. Installation

As the Mini Docking Station comprise several components and some components require specific installation procedure, please follow the steps described in this manual to install the drivers first and then make the connection.

A. On Windows 2000 / XP / Vista

To install the Driver:

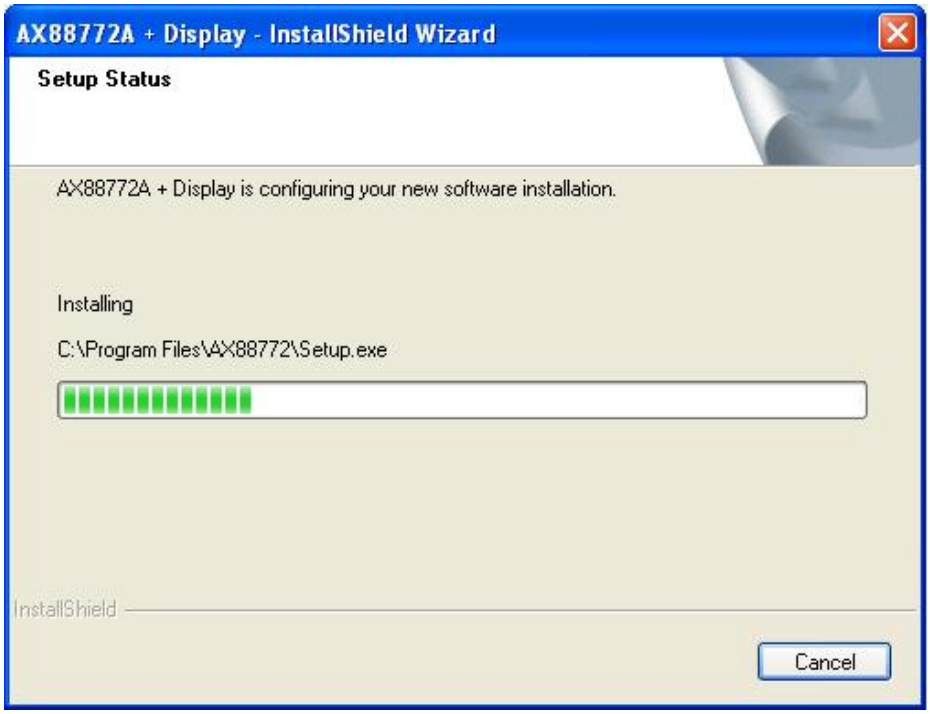
1. Insert the provided CD into your disc drive, locate and double-click the **Setup.exe** file under **E:\Driver** where E is your disc drive letter.


AX88772A + Display - InstallShield Wizard
Preparing Setup
Please wait while the InstallShield Wizard prepares the setup.
AX88772A + Display Setup is preparing the InstallShield Wizard, which will guide you through the rest of the setup process. Please wait.
InstallShield
Cancel

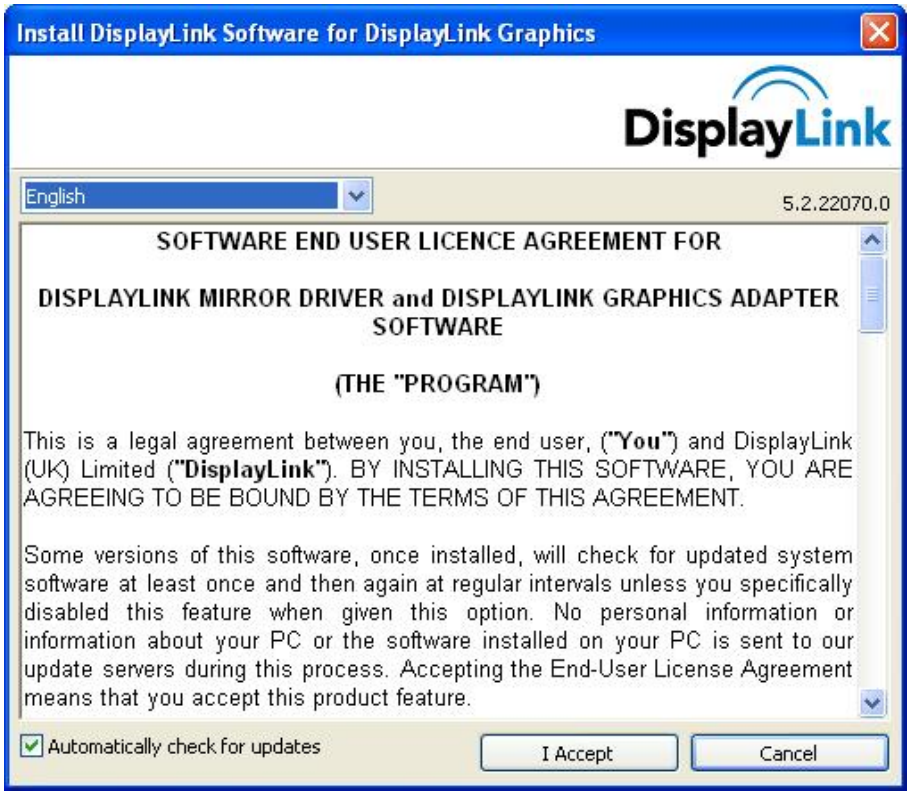
2. Please click Next to install the driver.

AX88772A + Display - InstallShield Wizard
Welcome to the InstallShield Wizard for AX88772A + Display
The InstallShield Wizard will install AX88772A + Display on your computer. To continue, click Next.
< Back
Next >
Cancel

3. Please wait when installation.

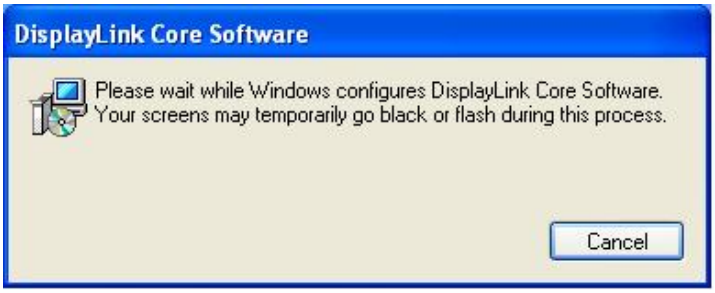


5. Please click **I Accept** after reading the statement of "**Software End User License Agreement**".


Install DisplayLink Software for DisplayLink Graphics
DisplayLink
English
5.2.22070.0
SOFTWARE END USER LICENCE AGREEMENT FOR
DISPLAYLINK MIRROR DRIVER and DISPLAYLINK GRAPHICS ADAPTER SOFTWARE
(THE "PROGRAM")
This is a legal agreement between you, the end user, ("You") and DisplayLink (UK) Limited ("DisplayLink"). BY INSTALLING THIS SOFTWARE, YOU ARE AGREEING TO BE BOUND BY THE TERMS OF THIS AGREEMENT.
Some versions of this software, once installed, will check for updated system software at least once and then again at regular intervals unless you specifically disabled this feature when given this option. No personal information or information about your PC or the software installed on your PC is sent to our update servers during this process. Accepting the End-User License Agreement means that you accept this product feature.
Automatically check for updates
I Accept
Cancel

Do not connect the docking station to your computer at this stage. Please proceed to next section to continue with the video component installation.

6. Please wait while Windows configures DisplayLink Core Software. Your screens may temporarily go black or flash during this process.


DisplayLink Core Software
Please wait while Windows configures DisplayLink Core Software.
Your screens may temporarily go black or flash during this process.
Cancel

***Note**:* You may need to restart your system for the configuration changes made to DisplayLink Graphics to take effect.

7. After the installation is completed, you will see the DisplayLink Manager Icon in System Tray that looks like a monitor as below. Click on the icon to bring up the menu.

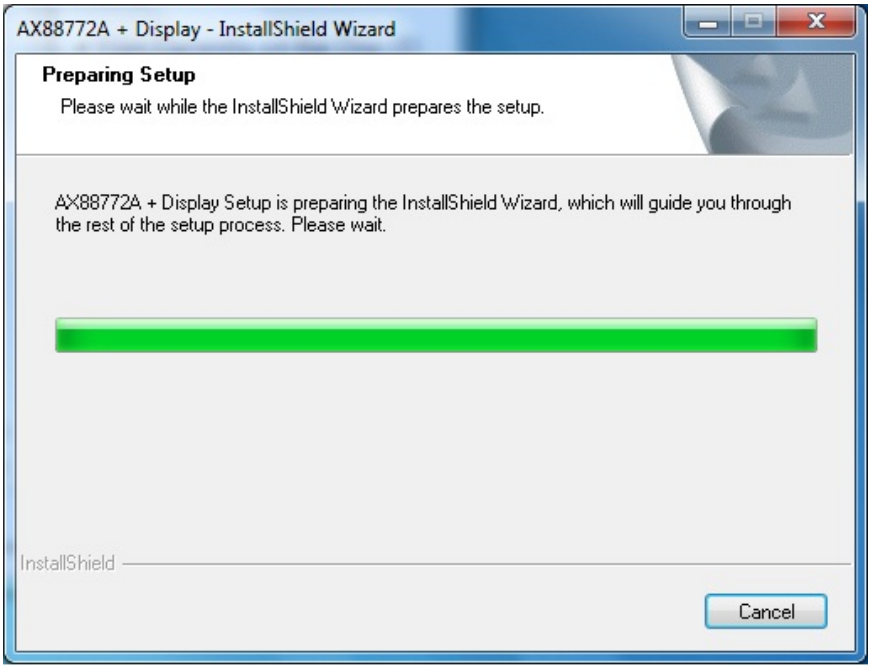
-**Extend Mode**: The screen is part of the extended desktop.
-**Mirror Mod**e: The screen copies the contents of the primary screen.
-**Off Mode**: The screen is black.
-**Set as Main Monitor**: The screen is the primary screen.
-**Notebook monitor off**: The Notebook screen is black and the DisplayLink screen is the primary screen.

**Actual strings depend on your operation system. These screen shots are from Windows XP SP2 and Vista, it might vary slightly for each operation system.*

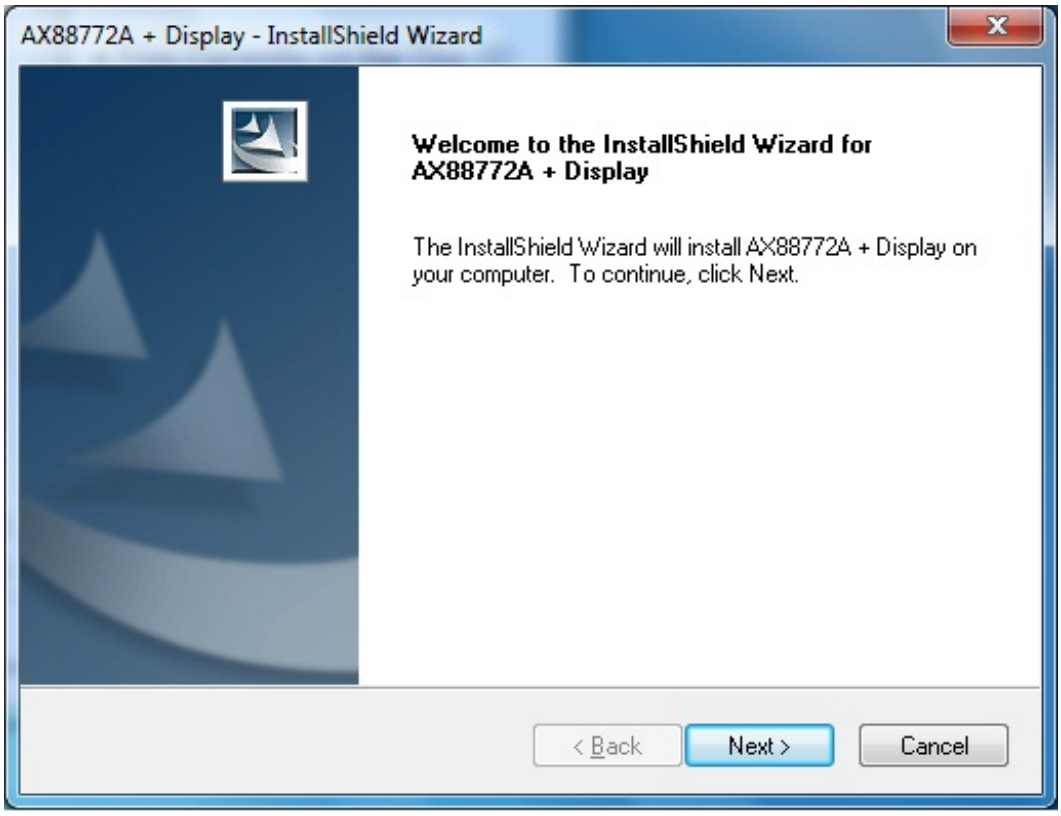
B. On Windows 7

To install the Driver:

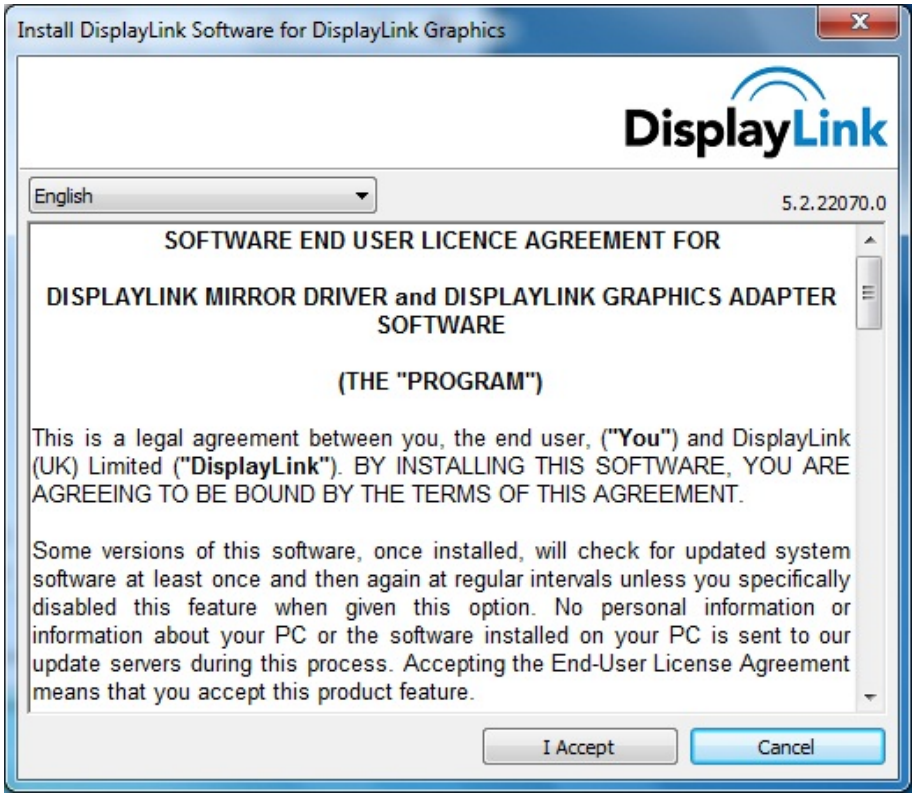
1. Insert the provided CD into your disc drive, locate and double-click the **Setup.exe** file under **E:\Driver** where E is your disc drive letter.


AX88772A + Display - InstallShield Wizard
Preparing Setup
Please wait while the InstallShield Wizard prepares the setup.
AX88772A + Display Setup is preparing the InstallShield Wizard, which will guide you through the rest of the setup process. Please wait.
InstallShield
Cancel

2. Please click Next to install the driver.

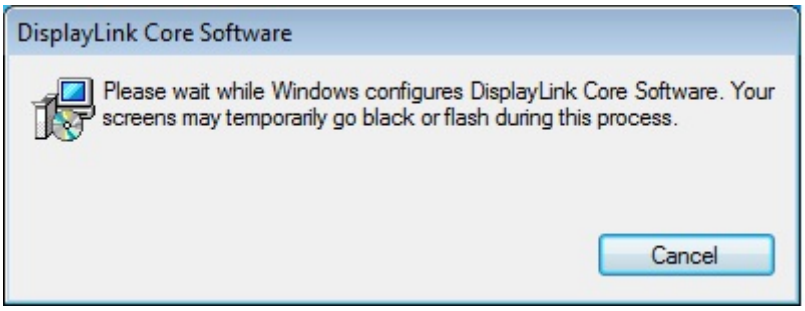

AX88772A + Display - InstallShield Wizard
Welcome to the InstallShield Wizard for AX88772A + Display
The InstallShield Wizard will install AX88772A + Display on your computer. To continue, click Next.
< Back
Next >
Cancel

3. Please click **I Accept** after reading the statement of "**Software End User License Agreement**".

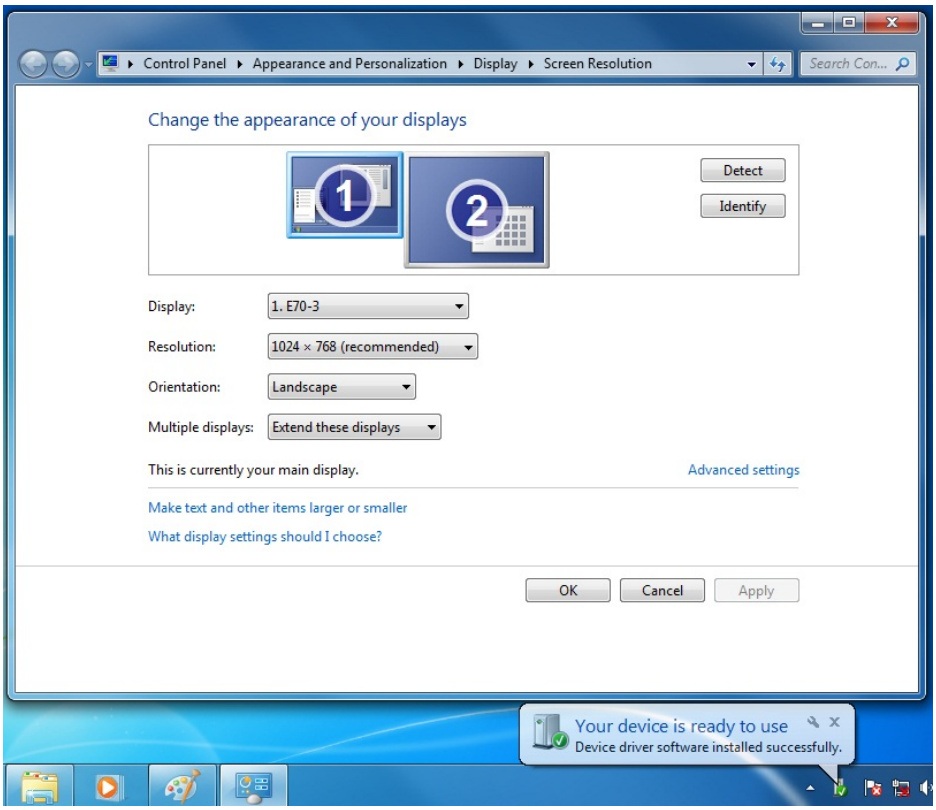

Install DisplayLink Software for DisplayLink Graphics
DisplayLink
English
5.2.22070.0
SOFTWARE END USER LICENCE AGREEMENT FOR
DISPLAYLINK MIRROR DRIVER and DISPLAYLINK GRAPHICS ADAPTER SOFTWARE
(THE "PROGRAM")
This is a legal agreement between you, the end user, ("You") and DisplayLink (UK) Limited ("DisplayLink"). BY INSTALLING THIS SOFTWARE, YOU ARE AGREEING TO BE BOUND BY THE TERMS OF THIS AGREEMENT.
Some versions of this software, once installed, will check for updated system software at least once and then again at regular intervals unless you specifically disabled this feature when given this option. No personal information or information about your PC or the software installed on your PC is sent to our update servers during this process. Accepting the End-User License Agreement means that you accept this product feature.
I Accept
Cancel

Do not connect the docking station to your computer at this stage.
Please proceed to next section to continue with the video component installation.

4. Please wait while Windows configures DisplayLink Core Software. Your screens may temporarily go black or flash during this process.


DisplayLink Core Software
Please wait while Windows configures DisplayLink Core Software. Your screens may temporarily go black or flash during this process.
Cancel

5. After the installation is completed, the following Window will pop up. You can change the appearance of your displays through the Window. Moreover, additional controls are available in Windows 7: Orientation (Portrait, landscape, rotated portrait, rotated landscape)



6. To control the behavior of an attached DisplayLink device (or screen), it is possible to use **Windows Key+P** to display a menu (and cycle through it) to allow: Disconnect Projector, Duplicate, Extend, Projector Only.

**Actual strings depend on your operation system. These screen shots are from Windows 7 and might vary slightly for each operation system.*

C. Connecting the Docking Station to Computer

1. Plug the power cord of the power adaptor into the **DC IN** jack on the back of the docking station and then connect the power adapter to a working electrical outlet.

   The **Power** indicator on the front panel glows when the docking station is powered on.

2. Plug the square end of the USB cable into the USB upstream connector at the back of the docking station.
3. Plug the other end of the USB cable into an available USB 2.0 port on your computer.

Upon the USB connection, your computer will automatically complete the remaining installation, including installing Windows built-in drivers for the USB hub.

A pop-up message will appear in the notification area indicating the installation status. Wait for the final message indicating the driver software installation is successful. Then the docking station is ready for use.

D. Connecting Devices to the Docking Station

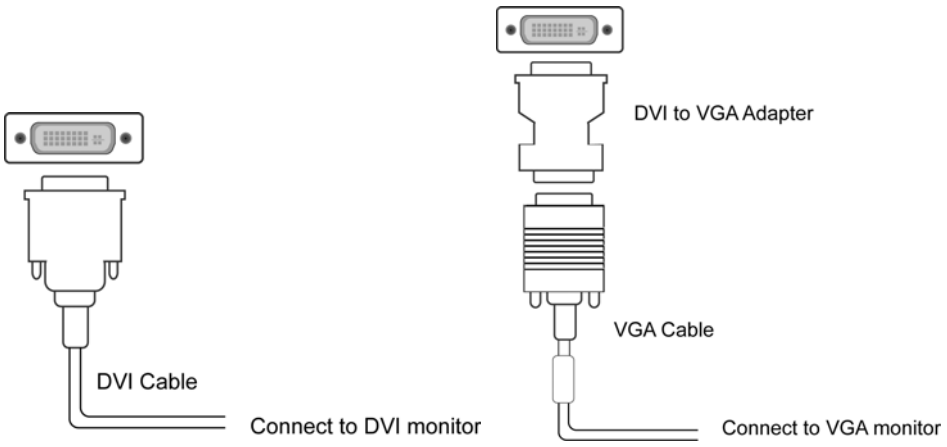
Now the installation is complete. You can connect the peripherals/monitor to appropriate ports on the docking station as required. If required, you can connect and disconnect the peripherals/monitor any time without disconnecting the docking station from the USB port on your computer.

Connecting Ethernet network device

1. Connect an Ethernet cable to the **Ethernet** port on the docking station.
2. Connect the other end of the Ethernet cable to your network hub, switch or router.

Connecting DVI Monitor

- **For DVI model:** The equipped DVI-I (DVI-Integrated) connector transmits both the digital and analog signals. This means it supports either of these two connection types:
  - It can be connected to a DVI-D (digital) monitor using a DVI cable (not provided)
  - Or, it can be connected to an analog VGA monitor using the privided DVI-I to VGA adapter and a VGA cable (not provided).



Upon the connection it's normal that the screen flicks black a couple of times. Once the connection is done, an extended screen will appear on the add-on monitor. Sometimes it takes time for the add-on monitor to show the video. Please wait for while.

For Windows Vista, if the add-on monitor has been blank for a while, please reboot your system again.

To change the display mode, see next chapter for instructions.

Connecting USB Devices

Connect your USB devices to the USB ports on the docking station. As long as one USB device is connected to the port and the connection works properly, the USB LED glows green (on). When no USB device is connected to the port, the LED light is off.

If your USB device, such as a printer or optical drive, etc., came with its own AC adaptor, make sure that it is plugged into the device and a working electrical outlet.

3. Using the Docking Station with Video

USB 2.0 Ports

The four USB ports on the docking station function just like the ports on a USB hub. Just connect any USB device to the docking station's USB ports when required.

- All the four USB ports provide power when the computer is either off, suspended or hibernated. This means you can use the USB port for power charging purpose.
- The USB port supports hot-plug feature. You may plug and unplug an USB device from the docking station at any time when required.
- Some USB devices, e.g., printers and optical drives, require higher power to operate. To use these devices, the power adapter shipped with the device should be plugged into the device and the mains.

Ethernet Port

The Ethernet port supports Ethernet 10/100 Mbps function. To connect your computer to a network through the docking station, attach one end of a network cable (not provided) to the **Ethernet** port on the docking station and the other end to your network hub, switch or router for network access.

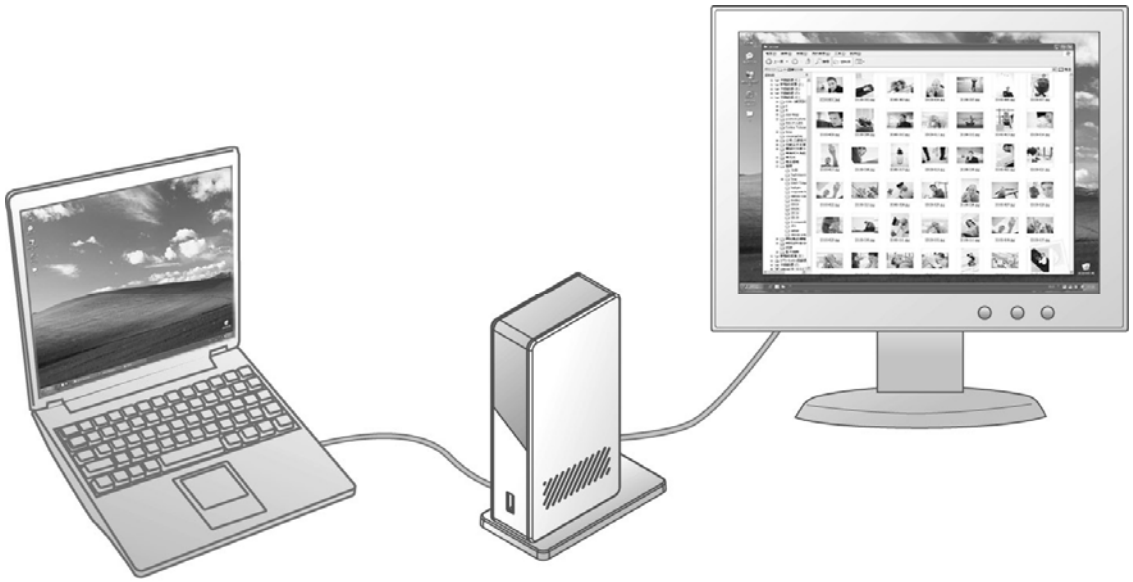
Video Port

Display Modes

There are several ways you can utilize the monitor attached on the docking station. The add-on monitor can be configured to use either "mirror mode", "extended mode" or be the primary display as described in this section.

Extend Your Windows Desktop to Add-on Monitor (Default)

In this so-called "extended mode", your display will be spread over the add-on monitor(s). This mode allows you to perform multiple tasks more effectively without overlapping windows.



Extended mode is the default setting. To set up the video component to use or restore extended mode, follow these steps:

1. Position the mouse anywhere on your computer desktop, right-click and select **Screen Resolution** on Win 7, **Personalize** > **Display Settings** on Vista or **Properties** > **Settings** on XP/2000.
2. In the **Display** drop-down menu, select the option with the string "**DisplayLink Graphics Adapter**".
3. Check the **Multiple Displays**> **Extend these displays** on Win 7, **Extend the desktop onto this monitor** box on Vista or **Extend my Windows desktop onto this monitor** box on XP/2000.
4. Drag the icons in the window at the top of the screen to match the physical arrangement of your primary monitor and add-on monitor.

The add-on monitor connected to the docking station may be identified as either "2" or "3", depending on your computer, although there may not be a total of 3 screens connected.

5. Click **OK** to close the settings screen.

Once the setting is done, to use your extended desktop, simply drag and drop your open windows over to your second monitor. However, note that some applications may not support display on the extended desktop.

Cursor disappeared ?

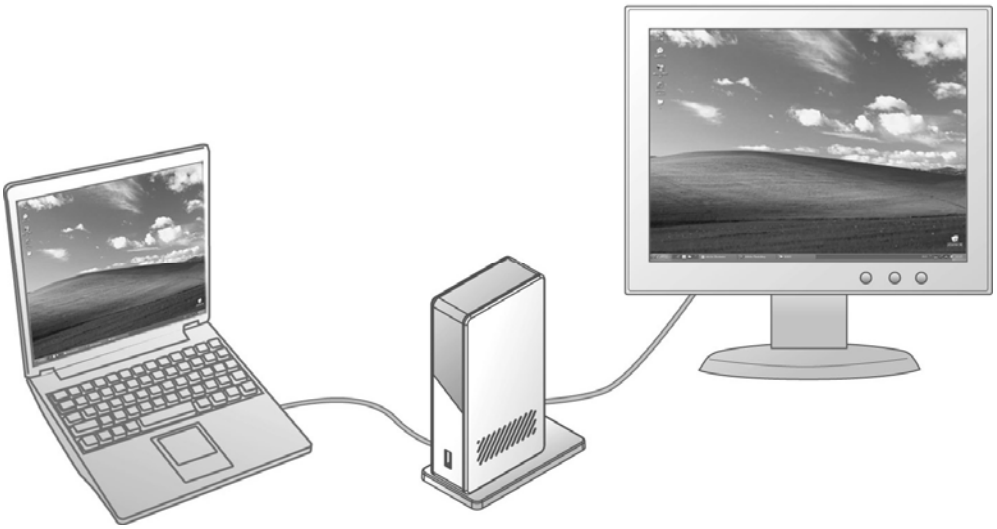
If you're in extneded mode but the add-on monitor is not connected, the desktop still pans to the add-on monitor and it's possible that your cursor has moved to the extended desktop so that you cannot find it on the primary display. To solve the problem in such a case, connect the add-on monitor to the docking station or keep moving your mouse to try or unplug the docking station first to restore the cursor.

Video and DVD Playback in Extened Mode

On Windows Vista with extended mode, it's suggested that you run video or DVD playback programs on your primary monitor instead of the add-on monitor to ensure the playback performance.

Mirror Your Windows Desktop

This mode is referred to as "mirror" or "clone" mode. In this mode, your original screen (the primary display) will be mirrored to the add-on monitor.



In mirror mode, the video component will automatically select the settings (screen resolution, color quality and refresh rate) for the add-on monitor. But you can manually adjust the settings as required. However, the settings of the add-on monitor are limited by that of the primary monitor. For example, even though your add-on monitor supports a resolution of up to 1680x1050, you can only configure it to use 1280x1024 due to the primary monitor only supports a resolution of up to 1280x1024.

If you change the video output to extended mode and then want to switch back to mirror mode, follow these steps:

1. Position the mouse anywhere on your computer desktop, right-click and select **Screen Resolution** on Win 7, **Personalize** > **Display Settings** on Vista or **Properties** > **Settings** on XP/2000.
2. In the **Display** drop-down menu, select the option with the string "**DisplayLink Graphics Adapter**".
3. Check the **Multiple Displays**> **Duplicate these displays** on Win 7, uncheck the **Extend the desktop onto this monitor** on Vista or **Extend my Windows desktop onto this monitor** on XP/2000.
4. Click **OK** to close the settings screen.

Be the Primary Monitor

To make the add-on monitor the primary display:

1. Position the mouse anywhere on your computer desktop, right-click and select **Screen Resolution** on Win 7, **Personalize** > **Display Settings** on Vista or **Properties** > **Settings** on XP/2000.
2. In the **Display** drop-down menu, select the option ends with **DisplayLink Graphics Adapter**.
3. Check the **This is my main monitor** box on Vista/Win 7 or **Use this device as the primary monitor** box on XP/2000.

   On some PCs and laptops it is necessary to disable the main display (i.e. uncheck the **Extend the desktop onto this monitor** or **Extend my Windows desktop onto this monitor** box for the main display) as part of the same settings change.

4. Click **OK** to close the settings screen.

The add-on monitor stays primary if the PC enters hibernate or suspend mode or is rebooted. If the add-on monitor is unplugged, the main display becomes primary again.

Adjusting Resolution, Color Depth and Refresh Rate

There are three components that make up the screen mode:

Resolution: In common usage, this refers to the number of pixels displayed on screen horizontally and vertically.

Color Depth: This defines the number of different colors that can be shown on the screen at the same time.

Refresh rate: Measures the speed that the entire screen is rescanned. Higher frequencies reduce flicker.

Some monitors advertise the supported modes through the video connector. If this is the case, the video component identifies the supported modes from the monitor. If the monitor does not advertise the supported modes, the video software chooses a set of common screen modes for the monitor.

The software supports the modes listed below.

Color Depth / Resolution	Refresh rates available at 16 bit color quality	Refresh rates available at 32 bit color quality
640x480	60 72 75 85	60 72 75 85
800x600	56 60 72 75 85	56 60 72 75 85
1024x768	60 70 75 85	60 70 75 85
1280x960	60 85	60 85
1280x1024	60 75	60 75
1360x768	60	60
1366x768	50 60	50 60
1368x768	60	60
1400x1050	60 75 85	60 75 85
1440x900	60	60
1600x1200	60	60
1680x1050	60	60
1920x1080	60 50	60 50

About the resolutions and refresh rates available to users

The resolutions and refresh rates available to the user through Windows are a comprise of the support from the following elements:

- The video component of the docking station
- The primary monitor and the add-on monitor
- The primary video card on your computer and installed drivers

Therefore, for example, if your monitor doesn't support a resolution of 1600x1200, then 1600x1200 is not possible though your dokcing station's video component supports 1600x1200. This ensures that the monitor cannot be put into an unsupported mode, which might damage it.

If cloning the primary display, the video component will try to use the preferred monitor mode. In some cases, this may not be the most appropriate mode for the cloned desktop. It is recommended that the primary display resolution be changed to closer match the default resolution of the add-on monitor.

To configure the three components (resolution, color depth and refresh rate) of a screen mode, follow these steps:

1. Position the mouse anywhere on your computer desktop, right-click and select **Screen Resolution** on Win 7, **Personalize** > **Display Settings** on Vista or **Properties** > **Settings** on XP/2000.
2. In the **Display** drop-down menu, select the option ends with **DisplayLink Graphics Adapter**.
3. To change the screen resolution or color quality, select those options on the screen. Be sure to select one of the supported resolutions and color quality numbers in the table above. For an add-on monitor, you can also select any resolution or color quality supported by that monitor.
4. To change the refresh rate, click **Advanced…** and then click **Monitor**.
5. Select a refresh rate from the **Screen** refresh rate drop-down list and then click **Apply**.
6. Click **OK** to close the settings screen.

Disconnecting the Docking Station

If the docking station is unplugged from the computer, the add-on monitor goes blank. All windows and icons move to the primary screen.

On reconnection of the docking station, the docking station returns to the same mode as it was before disconnection. However, windows and icons that were previously on the screen will not be moved back.

How Standby or Hibernate Mode Affects Devices Attached to the Docking Station

External Monitors

When the docking station is connected to a computer and an external monitor, if the computer goes into standby or hibernate mode, the external monitor display goes blank.

When the computer returns to an active state, the external monitor display keeps the same settings it had before the computer went into standby or hibernate mode. However, if the add-on monitor was set for extended mode, windows that were previously on the external monitor will not move back to that secondary monitor. Also, if the add-on monitor is in extended mode and the computer requires a login after standby or hibernate mode, the login screen appears on the primary computer monitor, not the external monitor.

If the computer is shut down, restarted and logged in, again the add-on monitor returns to the same mode as it was before shutdown.

Other Devices

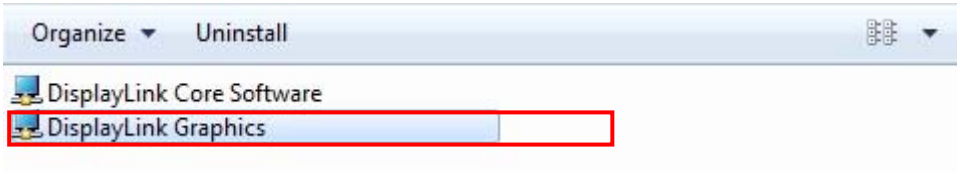
If another device is connected to a port on the docking station and the computer goes into standby or hibernate mode, that device will not function. For example, if you are using the Ethernet port for high-speed network access, network access will not be available until the computer returns to an active state.

4. Uninstalling the Drivers

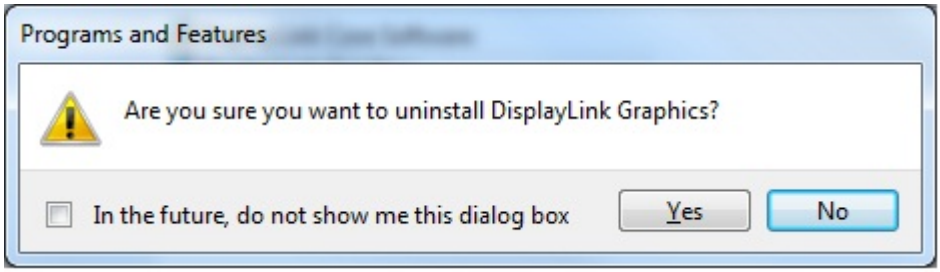
Uninstalling the Driver

Please take these steps to uninstall Drive:

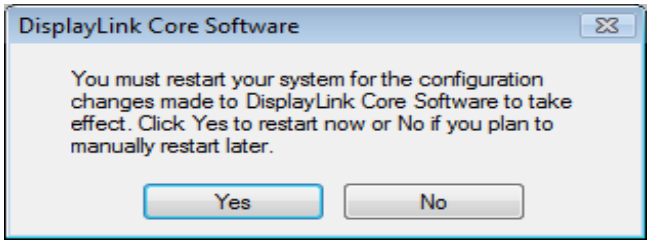
1. Open the **Control Panel** and double-click **Uninstall a Program** on Win 7, **Programs and Features** on Vista or **Add or Remove Programs** on 2000/XP.
2. Select **DisplayLink Graphics**…and click Uninstall or Remote



3. Click **Yes** to confirm the removal.


Programs and Features
Are you sure you want to uninstall DisplayLink Graphics?
In the future, do not show me this dialog box
Yes
No

4. Click **Yes** to restart your computer. You can also disconnect the video connection now.


DisplayLink Core Software
You must restart your system for the configuration changes made to DisplayLink Core Software to take effect. Click Yes to restart now or No if you plan to manually restart later.
Yes
No

5. Specifications

General		
Host Interface	USB 2.0	
Operating System Support	Windows® 2000 SP4, XP SP2, Vista™, Windows® 7	
Ports and Connectors		
Upstream	1 x USB Type B Female (Black)	
USB Hub Downstream	4 x USB Type A Female (Black)	
Video Output Port	1 x DVI Female (White).	
LAN	1 x RJ-45 Female	
Power	1 x DC Jack (Black).	
LEDs		
Power LED	On: Power is supplied to the docking station. Off: No power is supplied to the docking station.	
USB Hub LED	On: Any of the four USB downstream ports is connected to a USB device. Off: No USB device is connected.	
LAN LEDs	10/100	1 x LED (Green)
	Link	1 x LED (Green)

* Specification is subject to change without further notice.

6. Regulatory Compliance

FCC Conditions

This equipment has been tested and found to comply with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference

(2) This device must accept any interference received. Including interference that may cause undesired operation.

CE

This equipment is in compliance with the requirements of the following regulations: EN 55 022: CLASS B

WEEE Information

For EU (European Union) member users:
According to the WEEE (Waste electrical and electronic equipment) Directive, do not dispose of this product as household waste or commercial waste. Waste electrical and electronic equipment should be appropriately collected and recycled as required by practices established for your country. For information on recycling of this product, please contact your local authorities, your household waste disposal service or the shop where you purchased the product.